

# SEQUENCE LISTING

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Liew, Choong-Chin

<120> Method for the Detection of Gene Transcripts in Blood and Uses  
Thereof

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<150> US

<151> 2000-01-04

<150> US 60/115,125

<151> 1999-01-06

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<170> PatentIn version 3.2

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30 tctatagtgt ttgtcacaga tagtcccga ccacaccca gaccatagga gtcgctctcc 300  
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45 caaataaaca aaaacttcca atctccattt aaat 155

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 5 <213> Human  
  
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 10 aaacaccttt ttggtgtcaa gaagaaaaag actagcttca ctgaacagag aaatgctgga 120  
  
 cagtg 125  
  
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 25 gaaaaanttt tccggggggc ccaccggga agggntnccg gggaaggg 168

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 cccacatttc cattttaat atatactgtg cttacaaat attataatat gttttaaaat 180  
 40 atgttcacag aagcacctgg tctgtgaatg gcatgccagc attaaaaaaa ataagcattc 240  
 tttgaatata tatttagttt ttaattgtg taggaaaatc aaagccagag ggagtagaaa 300  
 caaaatttgt gattttctaa atacttctg gctgcaggga agaaaccacg tcccaggcga 360  
 45 agtctacct aattgatga taaaattaca tggaagggat tctgttggc atgaggacct 420

accaagatgg tcaacaga

438

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15 aaagggggaa ggcccccaa accggggggg gggnaaaaag gtgggtttcc cccttttcc 180

aattcccaa accaatttc aaaaggnaaa ccaacnttc ccaaatggg aaagg 235

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 45 caaattgggg ggnaaaccaa atttaagggg ggaagggggg gncccccccg ggaaaggccc 180



aaggggggaa aatttttccg ggggtgggtn gggggaacca atttaagggg ggggccccg 240

gggggggtcc ccttgggcn ttttcttt tgggtnaaaa aaaaaaaccc ctg 294

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15

ctgtacttga actctaaaac tgttgagaa actcagtgt tactccaaca gattcatttc 180

aaatagctgt aaaaggtatg ttactccag aagaccagag ttgcttctt tgaacttctc 240

20

attccttggg cctaggaacc ctcatcacc tcacccaac gtcaaccag atcttctctt 300

ccataaacag cactccctca ggcccctgcc tgacacaggc atagactgtc atgttgatt 360

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tttaggcggc accccaacaa caccaggccc tactttttcc aaggncgggg aagcccatgg 180

45 gttctgggna acgggcaatg cgggcttgca acgggnggaa naaaaacagn cccaaaagaa 240

tg 242

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 tctcagctca ctgcaacctc cacctctcag gagaattgct gaacctggga ggcggaggtt 120  
 15 gcagggagct gagattgcgc cactgccctc catcctgggc gacagagcaa gaacctgtct 180

c 181

20 <210> 21  
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 aaggggggtg ggggaagacc aaatttcttt gggaaanaac gcccccttgg ggaaaanaag 180  
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 ggaagaattg tatgtgggag ttttaatgg tctcatttca ttggctataa ctgagtaca 180  
 aggagaaata taactgcaga ggagctttga aaatttagtt cagctgaggg taaaggaaga 240  
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40 ttgaggcgaa aggactcgcg gatttgacgc ttgatgcggt tgcgctcgac ggcgagcttg 180  
 acgctctttt tgccgatcac caaacctagg cggggatgat caagctgggt atcgcgcgct 240

45 agcagcagga cacttttgcc cgggagcttt accgcttggg gagtcgaaga ctgccttгна 300  
 ttgccgggga gtcagcagtc gctttttccc ggnegaagcc tcgaactcac cancetgtct 360

ggattaatta gacagcaaga cgcttgcggc ccctttggcg cgaacgaacn ncgaaaagga 420

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acgagccggg ctggagcggg gggaaaagca aatgtaggca taagtaacga caatgcgggc 120

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 5 tgggcgccag caggggcggc cttcgggccca aaccgaacct caggtcanac ttccaagaaa 360  
 agtgggtgaa acgccagcgc atggcaaccc gtaccgcaaa ccgacacagg tagccggggg 420  
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aagaaggaaac ccacctngg ggccaaacaa aaacttaaaa acccccccat ttentncccc 180  
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 cctgtgaaac ccataaacag tgggaaatgg tgc 153  
  
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atttgtggtc ggaagctttg caaagagggg acctgggtct gaggacatg cgtggccact 120

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ggtgctcctg cgtttggact gtgcaggcct ctctatgct gatgcgtctc cccactcctg 180

agctaatttc tgcctgctc cttctgtgac atgtggcagc gtgggaaata gccactgtcc 240

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ggnaggaccc tgntgactcg gggggcggga gcngggancc agg 103

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5 actagatttt actgtagatg gtagataaaa gtccagtga aagcaaagat gtgtaatgtt 180

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45 ctgattaga 309

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 gatgagatga aatgaaatag tgaaatgaaa ttgaaataaa atcgaaatga gagatgaaat 300  
 gatgagatga tgaaattgat gaaatgatga gatgtgatga gatgaaatga tgagatgaga 360  
 20 tgagatgaca tgaaataatg aatgaaatt gaaatgagat aagatacgag ctgagatgca 420  
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 35 aaatgaatct gagatgaaat gagatgaaaa ntgatacgaa aaatgatata aaaaatatga 180  
 cctgagatga aatgagatga aaaatgatac gaaaaatgat ataaaaata tgacatgaaa 240  
 40 tgaaatgaga tgatgatgaaa tgacataatg aaatgatgaa ttgatgatat tgaaatgaaa 300  
 ttgaaagatg agatgaaatg atgagatgaa atgaaatgtt gaaatgatga agagatgtga 360  
 catgaaatga gctgaaatga gatgaaatga aatgagatta aatgatgaga tgaaaaatga 420  
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 gaaatgagat gaaataaaat aatgaaatga tgaaataatg aaatgaaaat gagatggaaa 180  
 30 tgatgagatg agaagaaatg atgagatgaa atgatgaaat gatgagatga ganaaaatga 240  
 gatgaaatga tgagatgaga tgaaatatga tgagttgaaa tgacataatg aatgaaatga 300  
 35 tgaaatggaa taatgaaatg gaaatgatga gctgagatgc aatgagttga aatgagatga 360  
 aatgatgaaa tgatgagatg aaatgatgaa atgaaataat gaaatgagat gaaataaaat 420  
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cataaaatga gatgaaatga gatgtaatga tggaatgaga tgagatgaaa tgagatgaaa 180

20 tgatagatga gataaaatga tgatatgaaa tgatgagatg aatgatgaga tgatgagatg 240

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cgccatgaaa ttctgctcg attagcttac gttgttggga tagaggccaa acaaggctgt 180

45 tatcggtacg aggaatggat gttcgatttc gtagaatagc cctgagagac ggccaatact 240

ctcacgagag gcagcaggcg cgtaaattac ccaattacaa caagtagagg tagcgaagga 300

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gtcattg 367

<210> 77

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atagaaatca ttatttctgt gggatggata attgggccaa attgtaaaat attttaacta 120

30 tcagtgtttg gggtttattt taaaagaat aggggtgccac cagatgttct ttagtggagg 180

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 30 tattacaaa atattggac cattantaaa gantagggcc aaccnaatt tttctgaaa 180  
 tttcgttaa atagccgtta aatgtttta cccattcat attggatacc ttaaattata 240  
 35 ataatggatt ttattgttaa attgtgtgtg tgtggtgtg atgccctgtc tttctcctc 300  
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 35 ccttgatggt caagtattta agaccctatg cnaatatattt ttaccttttc taataaacca 120  
  
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ggaaaanaaa tccttttaa anggaantcc aagggaagga ncctgnncaa nacttcccn 180

30 ccaataaaaa aaacntttt ggaaangggg aaa 213

<210> 81

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tgatgaaatg agatgagatg agaagaaatg acttgatgag atgagataaa atgatgaaat 120

gaaatgaagt gaaatgaaat tgaaatgaga tgagatgaaa tgagataaaa tgatgagatg 180

15 aaatgagaag aaatgagatg aaatgatgaa atgatgagat gagatgaaaa atgatgggat 240

gagaaatgag atgaaatgat gggatgaaat gaaatgaaat aatgaaataa tgaaatgaaa 300

20 tgaattgata atattgaagt gaaattgaaa gatgagattg gatgaaatga tgagatgaaa 360

tgaaatgttg aaatgaaatg aagagatgta acatgaaatg agctgaaatg atgagatgaa 420

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 25 gacctctgaa tgtattantg anncaagtga tagccaagat attttgaaga aaaatagata 120  
 ntagggacct gctctataag cccatcataa ttattatga agttataaca agtaaacag 180  
 taaggtattt ggcatggaat agagaaccca gaaacagacc caatgcatgg gtacaggata 240  
 30 taacacaggg aaatgagggg caatatatgg ttctgggata attatttata tggggaaaat 300  
 aaagaaattg gatccctacc tcacacatac aaaaaaaatc ataattgaat taaaaacttg 360  
 35 catgtgaaag gaaagacttt aaaacattta gaaaaagtat tggaggctat gatcttgggg 420  
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15 aggaaggaag gaagg 135

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aacttcctca gaaggacaag agacaaagaa gtgggggagg ccctcctatc catagctgag 180  
35 agggtttatt cttgtggtt ctgctgtcag agcctttgga tgtctgatct gagatggagc 240  
  
aaccacagct agacagaact tttagattt tgggggggtt aaaaggcctc aagcaaattc 300  
  
40 taaaactttc ttgaacccc ctggcatagg ctgagtttcc ctgact 346

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45 <212> DNA  
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<400> 85

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5 gaaaagaaaa tggtttttt tgccgaaatc aaccgggtaa 100

<210> 86

<211> 201

10 <212> DNA

<213> Human

<400> 86

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15 gaaaagagga agaaacgctt ttaggaggt aaggattaaa gtaaaaatta tttgacata 120

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25 <212> DNA

<213> Human

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tcttttacc cggcactcgg gtccaccctc gcggcaccag aggtattctc cggcgagtcg 180

35 ttaaccatcg caatgccga ccgagtttaa ggaccactcc ccaccttct cattagtaa 240

ggagaacgct actttacccc atagacggag aaatcgctac tcaactacca ggcgcgcgcc 300

gtcgagtccc tcttctctc tttatgcatt tagagcgctt tcgtaagagt tttccctaga 360

40 ttttctaag cgtagcgcgt ctactccaat gttttcgta atccagccc aactaacgcc 420

gcggaggagt cgtaccgtct actctatcc cgtcggctcg gatttactac aggagctaag 480

45 aaaacaaaa gtaccagccc taaaggaaag tcaaaggacg cccgtaaaaa a 531

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 20 agaggcggaa tccaaccatt caagagttat aacaagttat cggcactcgg gggatcagaa 420  
 tataaactta atgtccctt tattctcccg gacgccctt ttaaccatt ctctctatct 480  
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 <223> n is a, c, g, or t  
  
 <220>  
 25 <221> misc\_feature  
 <222> (788)..(788)  
 <223> n is a, c, g, or t  
  
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 30 <221> misc\_feature  
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 aaatgaaatg aaataatgaa atgaaattga aataaaattg aaatgagatg agatgaaatg 120  
  
 atgagatgat gaaataaaat gatgaaatga gatgtgatga gatgaaatga ngagatgaaa 180  
 40  
 tgatgagatg agatgacatg aaataaatga aataatgaaa tcgaaatgag atgagaagat 240  
  
 acgagatgag atgaaatgat gagatgaaat gatgaaatga gataagatga aaagagttga 300  
  
 45 tgagatgatg agatgaaatg agatgaaaag agatgaaatg agatgaaatg aaatgatgag 360

atgaaatgag gtgaaatgaa attagatgaa acgtaatgag atgaaatgac ataatgaaat 420  
gaaaaaatga aatgaaataa tgaaatgagg tgaaattaaa tgagatgatg aaattaaatg 480  
5 atgaaatgaa ataatgaaat ggaaatgaaa tggaaatgat gagatgaatg atgagatgaa 540  
atgatgagat gagatgtatt gatgagagga aatgatgaga tgtaatgaaa tgagatgaaa 600  
tgaatgagat gaaatggaat antggaangg aaattgattg gngatttgag atgaaatgag 660  
10 ntaaatgnga tgaattaatg atgagatgaa atgntgaatg ccgggggtgnn tgagatgaat 720  
tgagttgaac cctgngatga atgaagattg nntgaatggt ggntgaatgt tgaatggntg 780  
15 gntggnanaa tgcctgtngg 800

<210> 97  
<211> 334  
20 <212> DNA  
<213> Human

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25 atgaaatgat attgaaatga aattgaaaga tgagatgatg agatgaaatg gtgaaatgtt 120  
gaaatgaaat gatgaaatga atagatgtga catgaaatga gctgaaatga tgagatcaaa 180  
30 tgaaatgaaa tgagattaaa tgatgagatg aaaactgatg aaaacttaaa tgatgaaata 240  
atgaaatgaa aatgaaatgg aatgatgag atgagaagaa atgatgagat gagatgagat 300  
aaaatgagat gaaatgatga gatgaaatga tgag 334  
35

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<211> 100  
<212> DNA  
40 <213> Human

<220>  
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45 <222> (17)..(17)  
<223> n is a, c, g, or t

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5 tgcttggtag acgcttttga acccttcagc gctgaaagta 100

<210> 99  
 <211> 500  
 10 <212> DNA  
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<220>  
 15 <221> misc\_feature  
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 <223> n is a, c, g, or t

<220>  
 20 <221> misc\_feature  
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 <223> n is a, c, g, or t

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 agatgaaaag agttgatgag atgatgagat gaaatgagat gaaaagagat gaaatgagat 120  
 gaaatgaaat gatgagatga aatgaggtga aatgaaatta gatgaaacgt aatgagatga 180  
 30 aatgacctaa tgaaatgaaa aaatgaaatg aaataatgaa atgaggtgaa attaaatgag 240  
 atgatgaaat taaatgatga aatgaaataa tgaaatggaa atgaaatgga aatgatgaga 300  
 35 tgaatgatga gatgaaatga tgagatgaga tctaataatg agaggagatg atgagatgaa 360  
 ntgagatgaa aagagatgaa atgagatgaa accgaaatga tgagatgaaa tgaggtgaaa 420  
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 40 ataatgaaat gaggtgaaat 500

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 45 <211> 397  
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5 <221> misc\_feature  
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10 <221> misc\_feature  
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<223> n is a, c, g, or t

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15 <221> misc\_feature  
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<223> n is a, c, g, or t

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20 <221> misc\_feature  
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<223> n is a, c, g, or t

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25 <221> misc\_feature  
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30 <221> misc\_feature  
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<223> n is a, c, g, or t

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35 <221> misc\_feature  
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<223> n is a, c, g, or t

<220>

40 <221> misc\_feature  
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<223> n is a, c, g, or t

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tccccttgaa nntctctaaa ccttaacttt ctggccnttt tgttcagan atgcctaacc 120

ctcagggggt cttttgttct ctacgcctaa aaacttaatc tgtttggaac aattccnttt 180

5 cctctctgta gaaattgacc tggccatggc tcctgtgaat gatacggttg ctattatccc 240

tgaacactgt aaaaatgaac ttgaaacag ttgggtagga cccaaacaga aaatgatgta 300

tggcttgga atagtttagc tgaacattat gctttaatat ttactggcc attgcagcac 360

10 aggttagaa atttatgttc ggctttttaa agtttta 397

<210> 101

15 <211> 132

<212> DNA

<213> Human

20 <220>

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<222> (121)..(121)

<223> n is a, c, g, or t

25 <400> 101

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attaattgta ctactttcaa aagaattaat tgaagaaaga gagatacagg gtatctaggc 120

30 ngaggaagac cc 132

<210> 102

<211> 246

35 <212> DNA

<213> Human

<400> 102

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40 ggcactta atttataattg atatataata taaaaaatc aatgcagata ttgatataat 120

aaaaatagat aatggtaatc caagcacgat ggtagccatc actctaattg ctttgggggtt 180

45 aacctataac ttattaagta aagtgccaga atggttcttt gacagtatta aaattaaaga 240



aaacag

246

- 5 <210> 103  
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- <220>  
 10 <223> forward primer of exon 1 of insulin gene used for quantitative  
 RT-PCR analysis
- <220>  
 15 <221> primer\_bind  
 <222> (1)..(18)
- <400> 103  
 gccctctggg gacctgac 18  
 20
- <210> 104  
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 <212> DNA  
 25 <213> Artificial Sequence
- <220>  
 <223> reverse primer of exons 1 and 2 of insulin gene used for  
 quantitative RT-PCR analysis  
 30
- <220>  
 <221> primer\_bind  
 <222> (1)..(18)  
 35
- <400> 104  
 cccacctgca ggtcctct 18
- 40 <210> 105  
 <211> 24  
 <212> DNA  
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- 45 <220>  
 <223> forward primer of  $\beta$ MyHC gene used for quantitative RT-PCR

analysis

 $\langle 220 \rangle$ 

5 <221> primer bind

 $\langle 222 \rangle \quad (1) \dots (24)$ 

<400> 105

gctggaacgt agagactccc tgct

24

<210> 106

<211> 24

## <212> DNA

15 <213> Artificial Sequence

 $\langle 220 \rangle$ 

<223> reverse primer of  $\beta$ MyHC gene used for quantitative RT-PCR analysis

20

 $\langle 220 \rangle$ 

<221> primer bind

$$\langle 222 \rangle \quad (1) \dots (2\bar{4})$$

25

<400> 106

ggatccttc agatcatcca ctg

24

30  $\langle 210 \rangle$  107

<211> 20

## <212> DNA

### <213> Artificial Sequence

35  $\langle 220 \rangle$ 

<223> forward primer of ANF used for quantitative RT-PCR analysis

**<220>**

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40 <221> primer_bind
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 $\langle 222 \rangle$  (1)..(20)

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20

45

<210> 108  
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 <212> DNA  
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5

<220>  
 <223> reverse primer of ANF used for quantitative RT-PCR analysis

10 <220>  
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<400> 108  
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<210> 109  
 <211> 20  
 20 <212> DNA  
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<220>  
 <223> forward primer of APP used for quantitative RT-PCR analysis  
 25

<220>  
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35 <210> 110  
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40 <220>  
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19

5

<210> 111  
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10

<220>  
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15

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<222> (1)..(21)

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21

<210> 112

<211> 22

25

<212> DNA  
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<220>

<223> reverse primer of ZFP used for quantitative RT-PCR analysis

30

<220>

<221> primer\_bind

<222> (1)..(22)

35

<400> 112

ggattaaaat gaagcaccca ga

22